

In the Claims

1. (previously presented) A thermal barrier coating for a substrate, said coating comprising
a MCrAlY bond coat wherein M is at least one of Ni and Co;
an intermediate crack resistant ceramic coating on said bond coat; and
a vertically cracked top coat of yttria stabilized zirconia on said intermediate coat.
2. (previously presented) A thermal barrier coating as set forth in claim 1 wherein said intermediate coating includes a plurality of pores therein to resist crack propagation.
3. (original) A thermal barrier coating as set forth in claim 2 wherein said intermediate coating includes polyester.
4. (previously presented) A thermal barrier coating as set forth in claim 1 wherein said intermediate coating has thickness of from 0.002 to 0.010 inch.
5. (original) A thermal barrier coating as set forth in claim 2 wherein said intermediate coating has a thickness of from 0.004 to 0.006 inch.
6. (currently amended) A thermal barrier coating as set forth in claim 2 wherein said bond coat has a thickness of from 0.003 to 0.010 inch, said intermediate coating has a thickness of from 0.002 to 0.006 inch and said top coat has a thickness of from 0.005 to 0.045 inch.
7. (currently amended) A thermal barrier coating for a substrate, said coating comprising
a bond coat made of NiCoCrAlY;

- an intermediate crack resistant ceramic coating on said bond coat having a thickness of from 0.002 to 0.010 inch; and
- a vertically cracked top coat of yttria stabilized zirconia on said intermediate coat.
8. (original) A thermal barrier coating as set forth in claim 7 wherein said bond coat contains a reactive element selected from the group consisting of hafnium and silicon.
9. (original) A coated substrate comprising
- a substrate;
- a bond coat on said substrate comprised of a high temperature MCrAlY wherein M is at least one of Ni and Co and having a thickness of from 0.003 to 0.010 inch,
- an intermediate crack resistant ceramic coating containing yttria stabilized zirconia on said bond coat of a thickness of from 0.002 to 0.006 inch; and
- a vertically cracked top coat on said bond coat comprised of high temperature yttria stabilized zirconia of a thickness of from 0.005 inches to 0.045 inches.
10. (original) A coated substrate as set forth in claim 9 wherein said substrate is an inner shroud cover plate.
11. (original) A coated substrate as set forth in claim 9 wherein said substrate is one of a turbine rotating blade, turbine bucket, stationary vane and nozzle segment.